

[Freezer](#)

Storage of premixed resin or pre-preg material at -19 °C

[Airbench](#)

Possibility of an additional dust extraction if needed for a specific activity inside the cleanroom

[Plycutter](#)

[Materials analyzing Equipment](#)

Analysis of small composite samples.

DSC: To check the degree of cure.

TGA: Measures changing mass over time. Check how a material decomposes under certain temperatures/pressures.

DMA: Characterizing mechanical properties (stiffness, strength, E-modulus ..)

DEA: For investigation of the curing behavior of thermosetting resin systems, composite materials, adhesives and paints

Manufacturer: Netzsch

[Composite Machine Tool](#)

5 Axis CNC controlled machining tool for composite parts

Working envelope: 4000 x 2500 x 1000 mm

Max. weight on table: 2000 kg

Positioning accuracy: 30 microns

Repeatability accuracy: 25 microns

Spindle speed: 20,000 rpm

Manufacturer: Breton S.p.a. (Italy)

[Autoclave](#)

Pressure chamber for curing composite parts at elevated temperature

Working Dimensions: 985 mm x 2000 mm

Working Pressure: 6.5 bar

Design Temperature: 250 °C

Max. Pressurisation Rate: 0.5 bar/min

Max. Heating Rate: 3 °C/min

Individual Vacuum Zones: 5

Manufacturer: Autoclaves Group (UK)

Curing Oven

For heat treatment or out of autoclave curing of composite parts.

Design Temperature: 300 °C
Max. Heating Rate: 5 °C/min
Working Dimensions: 2000 mm x 2000 mm x 2000 mm
Manufacturer: Hedinair (UK)

RTM Press

Electrically heated pneumatic press for RTM manufacturing of composite parts. Resin injection and curing of the composite part at temperature and pressure is done without opening the mould (Out of Autoclave process).

Clamping Area: 2400 mm x 1000 mm
Daylight adjustment: 25 mm – 300 mm (height of tool)
Max. tool weight: 2000 kg
Max. clamping pressure: 14 bar
Max. clamping force: 268 t
Design Temperature: 200 °C
Heating capacity: 128 kW
Max. Heating Rate: 5 °C/min

Separate chiller for active insulation between the upper platen and the electronics

Manufacturer: Coexpair (Belgium)

RTM Panel

Mechanically clamped test panel mould with RTM capability. Used for investigating resin flow characteristics and material properties of composite specimens.

Mould dimensions: 500 mm x 500 mm
Max. pressure: 4 bar

Electrical heating

Screw adjustable cavity thickness

Toughened glass upper mould reinforced with steel supporting framework

Manufacturer: Composite Integration (UK)

Platen Press

High temperature hydraulic press for manufacturing of composite parts. Curing of the part at temperature and pressure is done without opening the tool (Out of Autoclave process).

Clamping Area:	1500 mm x 1000 mm
Max. daylight:	640 mm (height of tool)
Max. tool weight:	3800 kg lower platen, 1000 kg upper platen
Max. clamping pressure:	20 bar
Design Temperature:	390 °C (oil heating)
Max. Heating Rate:	6 °C/min
Max. Cooling Rate:	6 °C/min
Manufacturer:	Pinette Emidecau Industries (France)